

Date: Thursday, 17/08/2006 3:17:49 PM
 User: Linda Lacelle

Process Sheet

Customer :	CU-DAR001 Dart Helicopters Services	Drawing Name :	STEP EXTRUSION
Job Number :	28216		
Estimate Number :	10113		
P.O. Number :	N/A	Part Number :	D2244116
This Issue :	17/08/2006	S.O. No. :	N/A
Prsht Rev. :	NC	Drawing Number :	D2244 REV D1
First Issue :	N/A	Project Number :	N/A
Previous Run :	N/A	Drawing Revision :	D1
	Type :	Material :	N/A
	PURCHASED PARTS	Due Date :	30/09/2006
Written By :			Qty: 80 Um: Each
Checked & Approved By :			
Comment :	Est: A 24.03.04 New Issue KJ		

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0

PG

PURCHASING



Comment: PURCHASING

Issue P/O: 1875

C206108118

- a) Extrude as per Dwg D2244
- b) Material: 6061-T6 (QQ-A-200/8)
- c) Minimum yield tensile strength = 35 ksi
- d) Minimum ultimate tensile strength = 38 ksi
- e) Minimum elongation = 8%
- f) Order at 116" long
- g) Caradon Indalex Tool # MH-18865
- h) To be packed per DSK 066
- i) Pull test to ASTM standard B221 required.
- j) Material certification is required

(80)

2.0

D2244116P

Step Extrusion



Comment: Qty.: 1.0000 Each(s)/Unit Total: 80.0000 Each(s)
 STEP EXTRUSION

3.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive & Inspect For Transit Damage
 Ensure certification are attachec

[Signature]
 03/06/09/15 (80)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: PD Date: 07/01/02
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Thursday, 17/08/2006 3:17:49 PM

User:

Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STEP EXTRUSION

Job Number: 28216

Part Number: D2244116

Job Number:



Seq. #:

Machine Or Operation:

Description :

4.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

Check Pull test per Dwg D2244 for compliance page attached.

Check hardness with Webster tester

26.12.20

5.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock (lin feet)

Location: *W.A.*

26.12.20
89

6.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

88

26.12.20

Job Completion



26.12.20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

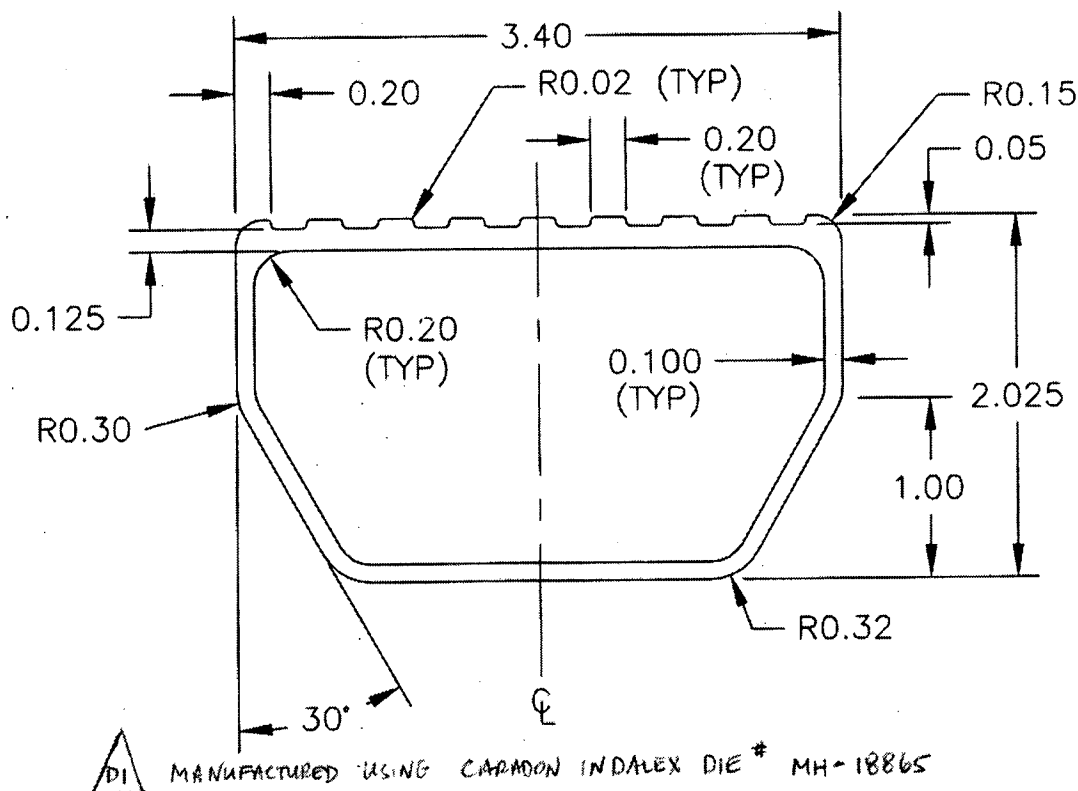
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN BW	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>KE</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2244	REV. D SHEET 1 OF 1
DATE 98.11.18	TITLE STEP EXTRUSION		SCALE 1:1
A	94.07.05	NEW ISSUE	
B	94.07.11	REDESIGNED	
C	94.08.08	REDESIGNED	
D	98.11.18	REMOVED 6005A MATERIAL INCORPORATED DEO 9081	
DI	01.04.17	ADDED DIE # <i>A GP</i>	

RELEASED
48.11.25 *KE*



PART NUMBER D2244-XX.X
XX.X IS CUT LENGTH IN INCHES

MATERIAL: 6061-T6 (QQ-A-200/8)

A SAMPLE FROM EACH BATCH WILL BE PULL TESTED TO ASTM STANDARD B221 BY AN APPROVED TESTING FACILITY TO ENSURE THAT THE BATCH MEETS THE MINIMUM MECHANICAL PROPERTIES STATED BELOW:

MINIMUM TENSILE YIELD STRENGTH = 35 ksi
MINIMUM ULTIMATE TENSILE STRENGTH = 38 ksi
MINIMUM ELONGATION = 8%

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED



325 rue Avro
Pointe-Claire QC H9R 5W3

Téléphone (514) 697-5120
Fac-simile (514) 694-8310

Rapport des propriétés mécaniques Mechanical Properties Test Report

Client / Customer : **DART AEROSPACE LTD**
Adresse / Address : **270 ABERDEEN STREET**
HAWKESBURY ONT,
K6A 1K7

commande Indalex / Indalex order # : **6082034**
bon de commande / Purchase order # : **1875**
de matrice / Die # : **MS 18865** Description : **Step Extrusion**
Alliage & trempage / Alloy & temper : **6061 T6**
Contrôle / Control # : **25130-1**
Coulée / Cast # : **38621**

	Min. requis Min. required	Résultat actuel Actual results
Tension ultime Ultimate stress (psi)	39 000	42258 ✓
Contrainte élastique Yield stress (psi)	35 000	37156 ✓
% élongation dans 2" % elongation in 2"	8	11 ✓
Dureté Rockwell E (hrs) Rockwell E Hardness (hrs)	88 @ 100	90 ✓

Composition chimique typique / Typical chemical composition :

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
6063	0.20 - 0.60	0.35 Max	0.10 Max	0.10 Max	0.45 - 0.90	0.10 Max	0.10 Max	0.10 Max
6065	0.60 - 0.90	0.35 Max	0.10 Max	0.10 Max	0.40 - 0.60	0.10 Max	0.10 Max	0.10 Max
6066A	0.68 - 0.72	0.15 - 0.27	0.08 - 0.12	0.20 - 0.24	0.48 - 0.62	0.03 Max	0.05 Max	0.03 Max
6061	0.40 - 0.80	0.70 Max	0.15 - 0.40	0.15 Max	0.80 - 1.20	0.04 - 0.35	0.25 Max	0.15 Max
6351	0.7 - 1.3	0.6 Max	0.10 Max	0.40 - 0.80	0.40 - 0.80	—	0.20 Max	0.20 Max

Nous certifions que le matériel fourni rencontre les exigences chimiques telles qu'annoncées par la norme ASTM B-221 et AMS QQA 200/8 ainsi que les exigences de nos procédures de contrôle de qualité.

We hereby certify that the material supplied meets the chemical properties as published by the ASTM B-221 and AMS QQA 200/8 standard and requirements of our quality control procedures.

Sincèrement vôtre, . date : 2008-08-30
Yours truly,

Bruno Morency
Technicien de la qualité
Quality technician

Indalex Limited



INDALEX LIMITED
525 AVEO Street
POINTE-CLAIRE, QC H9R 5W4
TELEPHONE: (514) 497-5120 & (800) 563-5120
FACSIMILE: (514) 694-8310 & (800) 563-8310

FACSIMILE TRANSMITTAL SHEET

TO: Christina Young

FROM: Bruno Morency
Quality Technician

COMPANY:

DART AEROSPACE LTD

DATE:

2006/08/30

FAX NUMBER:

1(613) 632-4443

TOTAL NO. OF PAGES INCLUDING COVER:

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SUBJECT:

REPORT

TIME:

☐ URGENT ☐ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS:

Mechanical properties report.

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Rapport des propriétés mécaniques Mechanical Properties Test Report

Client / Customer : **DART AEROSPACE LTD**
Adresse / Address : **270 ABERDEEN STREET
HAWKESBURY ONT,
K6A 1K7**

commande Indalex / Indalex order # : **6082034**
bon de commande / Purchase order # : **1875**
de matrice / Die # : **MS 18865** Description : **Step Extrusion**
Alliage & trempage / Alloy & temper : **6061 T6**
Contrôle / Control # : **26130-2**
Coulée / Cast # : **38574**

	Min. requis Min. required	Résultat actuel Actual results
Tension ultime Ultimate stress (psi)	38 000	38870 ✓
Contrainte élastique Yield stress (psi)	36 000	35617 ✓
% élongation dans 2" % elongation in 2"	8	11.5 ✓
Dureté Rockwell E (hrs) Rockwell E Hardness (hrs)	88 @ 100	94 ✓

Composition chimique typique / Typical chemical composition :

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
6063	0.20 - 0.60	0.35 Max	0.10 Max	0.10 Max	0.45 - 0.90	0.10 Max	0.10 Max	0.10 Max
6005	0.60 - 0.90	0.35 Max	0.10 Max	0.10 Max	0.40 - 0.60	0.10 Max	0.10 Max	0.10 Max
6006A	0.68 - 0.72	0.15 - 0.27	0.08 - 0.12	0.20 - 0.24	0.48 - 0.52	0.08 Max	0.05 Max	0.03 Max
6061	0.40 - 0.80	0.70 Max	0.15 - 0.40	0.15 Max	0.80 - 1.20	0.04 - 0.35	0.25 Max	0.15 Max
6351	0.7 - 1.3	0.5 Max	0.10 Max	0.40 - 0.80	0.40 - 0.80	—	0.20 Max	0.20 Max

Nous certifions que le matériel fourni rencontre les exigences chimiques telles qu'annoncées par la norme ASTM B-221 et AMS QQA 200/8 ainsi que les exigences de nos procédures de contrôle de qualité.

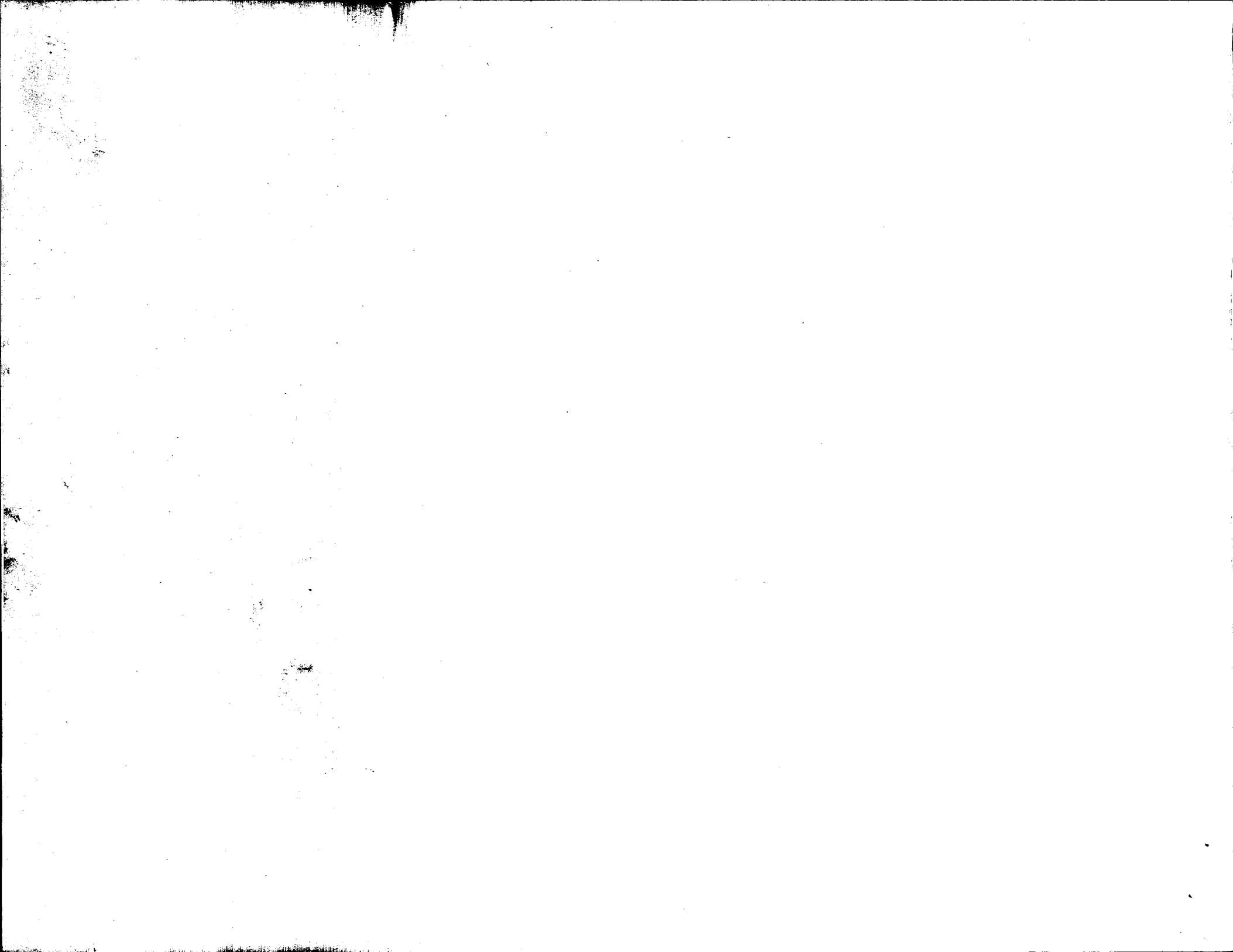
We hereby certify that the material supplied meets the chemical properties as published by the ASTM B-221 and AMS QQA 200/8 standard and requirements of our quality control procedures.

Sincèrement vôtre,
Yours truly,

date : 2006-08-06

Bruno Morano
Technicien de la qualité
Quality technician

Indalex Limited





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325 AVAO Street
POINTS-CLAIRE, QC H9R 5W3
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